

AMENDMENTS TO THE CLAIMS

1-21. (canceled)

22. (currently amended) An article, comprising:

a steel spider comprising a hub, a plurality of angularly spaced trunnion shoulders extending from the hub, each having a trunnion shoulder surface, and a corresponding plurality of angularly spaced trunnions extending from the plurality of each trunnion shoulders, each trunnion having a trunnion axis and a trunnion surface, the trunnion surfaces and the trunnion shoulder surfaces comprising a hardened case, wherein the hardened case is formed by an induction heat treatment that is applied concurrently to a first pair that includes a trunnion shoulder surface and a trunnion surface that corresponds to said trunnion shoulder surface, and thereafter is applied to each such pair consecutively until each such pair has been heat treated.

23. (original) The article of claim 22, wherein the induction heat treatment comprises the steps of (1) selecting an induction coil, which is adapted to receive a trunnion for heat treatment and apply a magnetic field to the trunnion surface and the trunnion shoulder surface; (2) placing a trunnion within the induction coil with its corresponding trunnion shoulder adjacent to the induction coil; (3) rotating the trunnion within the induction coil about the trunnion axis at a selected speed; (4) energizing the induction coil to apply the magnetic field and produce induction currents within the trunnion surface and trunnion shoulder surface of the article for a time sufficient to induce heating them to a heat treatment temperature (T_H) to at least a selected case depth; (5) withdrawing the trunnion from the induction coil at a selected rate; (6) cooling the trunnion surface and the trunnion shoulder surface of the article to a temperature (T_C) to the selected case depth; and (7) repeating steps (2)-(6) for a selected number of the trunnions.

24. (original) The article of claim 23, wherein the induction hardened case comprises a martensitic microstructure and the core comprises a microstructure that is

a mixture of pearlite and ferrite.

25. (original) The article of claim 24, wherein the induction hardened case has a hardness of about R_C 58-63, and the core has a hardness of about R_C 15-30.

26. (original) The article of claim 24, wherein the martensitic microstructure is a tempered martensitic microstructure.

27. (original) The article of claim 26, wherein the tempered martensitic microstructure is formed by the induction heat treatment.

28. (original) The article of claim 27, wherein the tempered martensitic microstructure has a hardness of about R_C 58-63.

29. (original) The article of claim 28, wherein the depth of the case is about 1 - 2 mm.